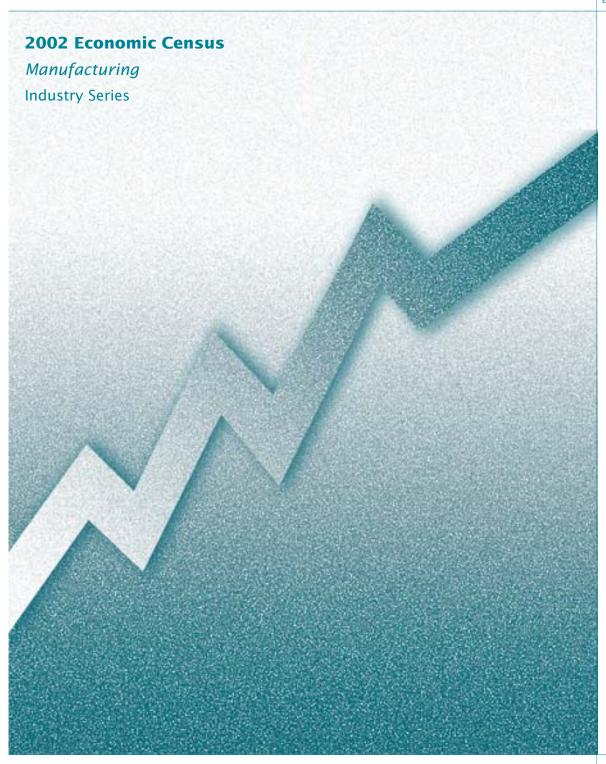
# Carbon and Graphite Product Manufacturing: 2002

Issued December 2004

EC02-311-335991 (RV)





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-- Not applicable for this report.

#### Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

		All	All em	ployees	Production workers				Total		Total capital
Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	estab- lish- ments <sup>3</sup>	Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)	Value added (\$1,000)	cost of materials (\$1,000)		expendi- tures (\$1,000)
335991, Carbon and graphite product											
manufacturing2002	104	129		337 361	6 167	14 374	209 981	916 205	797 330	1 724 926	r100 360
2001	N		9 174	342 410	6 838	14 652	214 806	903 240	872 776		57 691
2000	N	N	9 959	371 014	7 313	15 934	239 095	1 026 224	1 038 824	2 062 003	80 773
1999	N	N	10 290	378 493	7 641	16 448	247 837	1 037 140	1 007 647	2 099 032	89 666
1998	N	N	10 562	397 049	7 860	17 098	267 714	1 277 986	1 054 709	2 301 956	141 539
1997	99	124	10 691	397 781	7 980	17 533	261 158	1 267 908	1 096 041	2 340 732	179 043

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

#### Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

		All establishments <sup>2</sup>		All employees		Production workers						
Industry and geographic area	E¹	Total	With 20 em- ploy- ees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)	Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
335991, Carbon and graphite product manufacturing												
United States. California Connecticut New York Ohio Pennsylvania Texas Wisconsin	5 - 1 3	129 13 5 12 18 6 3	75 4 2 5 7 14 3	8 369 297 138 504 463 1 587 394 487	337 361 13 416 6 006 22 059 17 528 59 997 17 969 17 865	6 167 235 90 371 356 1 202 277 371	14 374 477 194 991 1 147 2 665 860 744	209 981 9 371 3 350 14 789 11 880 38 339 10 939 10 113	916 205 43 412 12 189 36 072 37 013 167 417 36 963 39 648	58 393 8 063 83 894 32 080	1 724 926 101 525 20 022 121 146 69 016 262 319 57 013 66 445	'100 360 '2 691 '512 '2 497 '1 116 '15 202 '1 389 '1 295

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.
³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

### Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
335991, Carbon and graphite product manufacturing	
Companies <sup>1</sup> number	104
All establishments <sup>2</sup>	129 54 49 26
All employees³         number.           Total compensation         \$1,000.           Annual payroll         \$1,000.           Total fringe benefits         \$1,000.	8 369 437 133 337 361 99 772
Production workers, average for year	6 167 6 196 6 262 6 107 6 079
Production worker hours	14 374 209 981
Total cost of materials         \$1,000.           Materials, parts, containers, packaging, etc., used         \$1,000.           Resales         \$1,000.           Purchased fuels         \$1,000.           Purchased electricity         \$1,000.           Contract work         \$1,000.	797 330 607 323 80 635 33 502 52 105 23 765
Quantity of electricity purchased for heat and power	1 100 661
Total value of shipments         \$1,000.           Primary products value of shipments         \$1,000.           Secondary products value of shipments         \$1,000.           Total miscellaneous receipts         \$1,000.           Value of resales         \$1,000.           Contract receipts         \$1,000.           Other miscellaneous receipts         \$1,000.	1 724 926 1 570 740 58 974 95 212 88 490 992 5 730
Primary products specialization ratio percent. Value of primary products shipments made in all industries \$1,000. Value of primary products shipments made in this industry \$1,000. Value of primary products shipments made in other industry \$1,000.	96 1 593 623 1 570 740 22 883
Coverage ratiopercent	99
Value added\$1,000	916 205
Total inventories, beginning of year \$1,000. Finished goods inventories \$1,000 Work-in-process inventories \$1,000 Materials and supplies inventories \$1,000.	425 975 133 666 173 759 120 330
Total inventories, end of year         \$1,000.           Finished goods inventories         \$1,000.           Work-in-process inventories         \$1,000.           Materials and supplies inventories         \$1,000.	400 111 132 362 163 672 106 048
Gross value of depreciable assets (acquisition costs) at beginning of year	'1 240 620 '100 360 '11 436 '88 924 '592 '2 109 '86 223 '71 537 '1 269 443
Depreciation charges during year\$1,000	r108 276
Total rental payments \$1,000. Buildings and other structures \$1,000. Machinery and equipment. \$1,000.	11 709 5 856 5 853
Total other expenses <sup>4</sup> \$1,000.  Response coverage ratio <sup>5</sup> percent.  Repair and maintenance services of buildings and/or machinery <sup>4</sup> \$1,000.  Communications services <sup>4</sup> \$1,000.  Legal services <sup>4</sup> \$1,000.  Accounting, auditing, and bookkeeping services <sup>4</sup> \$1,000.  Advertising and promotional services <sup>4</sup> \$1,000.  Expensed computer hardware and supplies and purchased computer services <sup>4</sup> \$1,000.  Refuse removal (including hazardous waste) services <sup>4</sup> \$1,000.  Management consulting and administrative services <sup>4</sup> \$1,000.  Taxes and license fees <sup>4</sup> \$1,000.  All other expenses <sup>4</sup> \$1,000.	101 385 89 12 838 3 588 3 499 1 599 2 274 3 209 2 106 3 605 7 150 61 518

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
2Includes establishments with payroll at any time during the year.
3Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.
4Based on 2002 Annual Survey of Manufactures (ASM) sample data.
5A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

#### Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class			All emp	oloyees	Pr	oduction worke	rs		Total	Tatal	Total
		All estab- lish- ments <sup>2</sup>	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)	Value added (\$1,000)	cost of materials (\$1,000)	Total value of shipments (\$1,000)	capital expendi- tures (\$1,000)
335991, Carbon and graphite product manufacturing											
All establishments	9 4 6 2 - 1 -	129 34 7 13 26 23 20 5	8 369 b 45 156 827 1 680 3 391 1 430 f	337 361 D 2 034 6 303 31 013 67 638 150 138 54 611 D	6 167 D 34 119 620 1 225 2 483 1 021 D	14 374 D 96 227 1 541 3 291 5 793 2 157 D	209 981 D 1 289 3 870 19 202 42 934 96 198 31 640 D	916 205	797 330 D 6 073 14 876 56 821 202 664 383 809 93 170 D	1 724 926 D 10 339 29 176 129 961 373 739 851 916 245 835 D	'100 360 D D D D '25 854 '36 344 D
2,500 employees or more  Administrative records <sup>4</sup>	9	36	- 151	6 739	116	241	- 4 181	- 15 272	- 13 989	- 29 258	- '541

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

¹Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

#### Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or		A.II	All employees		Pr	oduction work	ers		Total	Total	Total capital
product class code	Industry or primary product class	All estab- lish- ments <sup>1</sup>	Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)	Value added (\$1,000)	cost of materials (\$1,000)	ost of value of erials shipments	expendi- tures (\$1,000)
335991	Carbon and graphite product manufacturing	129	8 369	337 361	6 167	14 374	209 981	916 205	797 330	1 724 926	r100 360
3359911	Carbon and graphite electrodes for electric furnaces and electrolytic cell use	22	2 314	106 014	1 698	4 101	69 551	378 584	398 001	791 687	r27 400
3359913	All other carbon and graphite products	59	5 799	220 035	4 275	9 876	133 392	513 882	375 192	885 135	<sup>1</sup> 71 585

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

<sup>&</sup>lt;sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

#### Products Statistics: 2002 and 1997 Table 6a.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

		Number of		Product	shipments
Product code	Product	companies with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)
335991	Carbon and graphite product manufacturing	N N	××	X	1 593 623 2 202 666
3359911	Carbon and graphite electrodes for electric furnaces and electrolytic cell use	N	×	х	740 300
33599111	Carbon electrodes for electric furnaces and electrolytic cell use	N N	X X	X X	1 032 727 188 347
3359911101	Carbon electrodes for electric furnaces and electrolytic cell	N	X	Х	166 094
33599112	use	11 6	X X	X	188 347 166 094
	use	N N	X X	X X	551 953 859 306
3359911204	Graphite electrodes for electric furnaces and electrolytic cell use	13 11	X X	X X	551 953 859 306
3359911Y	Carbon and graphite electrodes for electric furnaces and electrolytic cell use, nsk	N N	X	X	- 7 327
3359911YWV	Carbon and graphite electrodes for electric furnaces and electrolytic cell use, nsk	_	x	x	_
3359913	All other carbon and graphite products	N N	X X	X X	7 327 810 221
33599131	Carbon and graphite brushes, contacts, and brush plates	N N	X X X	X X X	1 092 155 194 969
3359913101	Brushes and contacts (including automotive, fractional horsepower, and industrial brushes)	N 12			208 617 D
3359913104	1997 Carbon and graphite brush plates	11 6 5	x x x x x x x	x x x x x x x x	189 765 D 18 852
33599132	Carbon and graphite fibers	N N	;	Ŷ	209 316 325 955
3359913207	Carbon and graphite fibers	12	$\hat{x}$	ŝ	209 316
33599133	All other carbon and graphite products, except refractories	13 N	X	X	325 955 395 361
3359913311	All other carbon and graphite products, except refractories, for electrical uses, including welding products, illuminating carbons, battery (except silver or other metal contacts)	N 13	X X X	X X X	557 583 94 761
3359913313	All other carbon and graphite products, except refractories, for mechanical uses, rotor vanes, and other uses where motion is between two parts, except metallic oilless bearings	12			108 616 96 579
3359913316	All other carbon and graphite products, except refractories, for aerospace uses, including machined and unmachined	13	X X	X	154 370
	stock	9	X	X	D D
3359913319	All other carbon and graphite paste products, except refractories, for all other uses (including chemical, metallurgical, etc.)	3	x	х	D
3359913322	All other carbon and graphite products, except refractories, for all other uses (including chemical, metallurgical, etc.)	15	X X	Х	D 130 625
3359913Y	All other carbon and graphite products, nsk	16 N	X	X	230 529 10 575
3359913YWV	All other carbon and graphite products, nsk	N N N	X X X X X	X X X X X	10 575 -
335991W	Carbon and graphite product manufacturing, nsk, total	N N	X	X	43 102 77 784
335991WY	Carbon and graphite product manufacturing, nsk, total	N N	X X X	X X X	43 102 77 784
335991WYWW	Carbon and graphite product manufacturing, nsk, for nonadministrative-record establishments	N	×	x	14 646
335991WYWY	Carbon and graphite product manufacturing, nsk, for administrative-record establishments	N N	x	x x	19 901 28 456
	1997	N	Х	Х	57 883

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

#### Table 6b. Product Class Shipments for Selected States: 2002 and 1997

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3359911	Carbon and graphite electrodes for electric furnaces and electrolytic cell use  United States	740 300 1 032 727
	Ohio     2002       1997.     1997.	27 740 21 550 85 745 N
3359913	All other carbon and graphite products	
	United States.       2002.         California       1997.         New Jersey       1997.         New York       2002.         Ohio       2002.         Pennsylvania       1997.         Wisconsin       2002.         1997.       1997.	810 221 1 092 155 86 433 107 884 26 394 N 19 191 47 870 34 356 101 259 173 540 235 546 52 305 N

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

## Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
335991	Carbon and graphite product manufacturing		
00900001	Total materials	X	607 323
33100035	Castings, rough and semifinished	X X X	905 563 D D
331000AJ	Nonferrous metal shapes and forms (excluding castings, forgings, and fabricated metal products)	X	D D
32519227	Pitch	×	50 815 50 848
32419900	Coke (petroleum, metallurgical, calcined, foundry, etc.), used as raw material	ŝ	171 823
32799213	1997   2002.   1997   19	X X X	191 885 6 842 25 697
32799901		X	39 036
32799201	1997 2002	X	27 111 33 556
00970099	1997 All other materials and components, parts, containers, and supplies	X	43 406 200 480
00971000	Materials, ingredients, containers, and supplies, nsk	X X X	495 572 99 164 62 920

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.